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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,309	02/13/2004	Shuichi Takei	118504	5508
25944	7590	02/28/2005	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			TRA, TUYEN Q	
			ART UNIT	PAPER NUMBER
			2873	

DATE MAILED: 02/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/777,309	<b>Applicant(s)</b> TAKEI, SHUICHI	
	<b>Examiner</b> Tuyen Q. Tra	<b>Art Unit</b> 2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>02/04 and 01/05</u> | 6) <input type="checkbox"/> Other: _____  |

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## **DETAILED ACTION**

### **Oath/Declaration**

1. The declaration filed 01/25/05 is acceptable.

### **Drawings**

2. The drawings filed on 02/13/2004 in this application are accepted by examiner.

### **Claim Objections**

3. Claims 10 and 16 are objected to because of the following informalities:

Method claim 10 recites "the method comprising the electron injection layer of a plurality of metal compounds." which fails to show how to practice the claim method. Method should be comprising or consisting steps for depositing, forming... et al. Appropriate correction is required.

Claim 16, "metalelement" should be changed to --metal element--.

### **Claim Rejections - 35 USC § 102**

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-4, 10-12 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Ueda et al. (US 6809473 B2).

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- a) With respect to claims 1, 2 and 10, Ueda et al. discloses an organic electro-luminescence display element, finder screen display device, finder and optical device in Fig. 4 comprising of electrodes (items 1, 5) opposing each other; plural types of luminescent layers emitting different colors of light and lying between the electrodes (col. 12, lines 26-34); and an electron injection layer (item 4) lying between the electrodes (1, 5), the electron injection layer (4) including a plurality of metal compounds (col. 7, lines 20-29).
- b) With regard to claim 10-12, it should be noted that although claims 10-12 are "method claims", the method steps consist of the broad steps of "providing", "applying" etc and therefore these steps would be inherently satisfied by the apparatus of the reference as modified.

### **Claim Rejections - 35 USC § 103**

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al. (US 6809473 B2) as applied to claim 1 above.

Ueda et al. discloses an organic electro-luminescence display element, finder screen display device, finder and optical device in Fig. 4 comprising of electrodes (items 1, 5) opposing each other; plural types of luminescent layers emitting different colors of light and lying between the electrodes (col. 12, lines

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26-34); and an electron injection layer (item 4) lying between the electrodes (1, 5), the electron injection layer (4) including a plurality of metal compounds (col. 7, lines 20-29). However, Ueda et al. do not disclose method of how to deposit plurality of metal compounds on the electrooptic device. The method of depositing metal layer to the device is not germane to the issue of patentability of the device itself. Therefore, it is obvious to one skill in the art at time invention was made to use various way or method to deposit the metal layers for purpose of making such the electrooptic device and therefore this limitation have not given patentable weight.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al. (US 6809473 B2), as applied to claim 10 above, in view of Himeshima et al. (US 6633124B2).

Ueda et al. discloses an organic electro-luminescence display element, finder screen display device, finder and optical device in Fig. 4 comprising of electrodes (items 1, 5) opposing each other; plural types of luminescent layers emitting different colors of light and lying between the electrodes (col. 12, lines 26-34); and an electron injection layer (item 4) lying between the electrodes (1, 5), the electron injection layer (4) including a plurality of metal compounds (col. 7, lines 20-29).

However, Ueda et al. do not disclose method for depositing metal elements according to chemical bond force. Within the same field of endeavor, Himeshima et al. discloses process for producing an organic electroluminescent

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device with teaching of method for forming metal layers according to chemical bond force (col. 14, lines 20-36).

It would have been obvious, therefore, at the time the invention was made to a person having skill in the art to construct organic electro-luminescence display element with metal layers for electron injection layer such as disclosed by Ueda et al., with metal layers formed according to chemical bond force such as discloses by Himeshima et al., for purpose of forming electrode injection layer.

9. Claims 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al. (US 6809473 B2), as applied to claims 1 and 10 above, in view of Sato et al. (US 6534202 B2).

Ueda et al. discloses an organic electro-luminescence display element, finder screen display device, finder and optical device in Fig. 4 comprising of electrodes (items 1, 5) opposing each other; plural types of luminescent layers emitting different colors of light and lying between the electrodes (col. 12, lines 26-34); and an electron injection layer (item 4) lying between the electrodes (1, 5), the electron injection layer (4) including a plurality of metal compounds (col. 7, lines 20-29).

However, Ueda et al. do not discloses method for depositing metal elements according to chemical bond force. Within the same field of endeavor, Sato et al. discloses organic electroluminescent device and process for producing the same with teaching of method for forming cathode of a metal reducing the metal compound (Alkali metals have a high reducing ability) (col. 3, lines 25-28).

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It would have been obvious, therefore, at the time the invention was made to a person having skill in the art to construct organic electro-luminescence display element with metal layers for electron injection layer such as disclosed by Ueda et al., with method for forming cathode of a metal reducing the metal compound such as discloses by Sato et al., for purpose of reducing energy barrier.

10. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al. (US 6809473 B2), as applied to claim 10 above, in view of Aziz et al. (US 6811896 B2).

Ueda et al. discloses an organic electro-luminescence display element, finder screen display device, finder and optical device in Fig. 4 comprising of electrodes (items 1, 5) opposing each other; plural types of luminescent layers emitting different colors of light and lying between the electrodes (col. 12, lines 26-34); and an electron injection layer (item 4) lying between the electrodes (1, 5), the electron injection layer (4) including a plurality of metal compounds (col. 7, lines 20-29).

However, Ueda et al. do not discloses method for depositing metal elements according to chemical bond force. Within the same field of endeavor, Aziz et al. discloses organic light emitting device (OLED) with thick (100 to 250 nanometers) porphyrin buffer layer with teaching of method for forming metal layers according to valences of metals elements (col. 14, lines 20-36).

It would have been obvious, therefore, at the time the invention was made to a person having skill in the art to construct organic electro-luminescence

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display element with metal layers for electron injection layer such as disclosed by Ueda et al., with metal layers formed according to valences of metal elements such as discloses by Aziz et al., for purpose of forming electrode injection layer.


### **Conclusion**

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen Tra whose telephone number is (571) 272-2343. The examiner can normally be reached on Monday to Thursday from 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps, can be reached on (571) 272 - 2328. The fax number for this Group is (703) 872-9306.

tt

February 12, 2005

  
Georgia Epps  
Supervisory Patent Examiner  
Technology Center 2800